Exchange Rates and International Finance

Laurence S. Copeland

Contents

List of exhibits		
Pre	eface and acknowledgements	xi
1	Introduction	1
	Introduction	
	1.1 What is an exchange rate?	3
	1.2 The market for foreign currency	g
	1.3 The balance of payments	19
	1.4 The DIY model	24
	1.5 Exchange rates since World War II: a brief history	24
	1.6 Overview of the book	35
	Summary	37
	Reading guide	38
	Notes	38
F	Part 1 The international setting	43
	B	
2	Prices in the open economy: purchasing power parity	45
	Introduction	45
	2.1 The law of one price in the domestic economy	46
	2.2 The law of one price in the open economy	53
	2.3 A digression on price indices	57
	2.4 Purchasing power parity	60
	2.5 Purchasing power parity – the facts at a glance2.6 Purchasing power parity extensions	65 71
	2.6 Purchasing power parity extensions2.7 Empirical research	76
	2.8 Conclusions	77
	Summary	79
	Reading guide	80
	Notes	81
3	Financial markets in the open economy	84
-	Introduction	
		8 ² 85
	3.1 Uncovered interest rate parity3.2 Covered interest rate parity	92
	3.3 Borrowing and lending	92
	3.4 Covered interest rate parity – the facts	97
	3.5 Efficient markets – a first encounter	99

Contents

	3.6 The carry trade paradox 3.7 Purchasing power parity revisited Summary Reading guide Notes	101 106 111 112 112
4	Open economy macroeconomics Introduction 4.1 IS-LM model of aggregate demand 4.2 Aggregate supply 4.3 Conclusions Summary Reading guide Notes	115 115 116 136 142 142 144 144
Pa	art 2 Exchange rate determination	147
	Flexible prices: the monetary model Introduction 5.1 The simple monetary model of a floating exchange rate 5.2 The simple monetary model of a fixed exchange rate 5.3 Interest rates in the monetary model 5.4 The monetary model as an explanation of the facts 5.5 Conclusions Summary Reading guide Notes	149 149 150 157 169 171 175 176 176
6	Introduction 6.1 Setting 6.2 Equilibrium 6.3 Monetary expansion with a floating exchange rate 6.4 Fiscal expansion with a floating exchange rate 6.5 Monetary expansion with a fixed exchange rate 6.6 Fiscal expansion with a fixed exchange rate 6.7 The monetary model and the Mundell–Fleming model compared 6.8 Evidence 6.9 Conclusions Summary Reading guide Notes	178 179 182 182 184 186 187 189 192 193 193 194 194

		Contents
7	Sticky prices: the Dornbusch model	196
	Introduction	196
	7.1 Outline of the model	197
	7.2 Monetary expansion	202
	7.3 A formal explanation	205
	7.4 Case study: oil and the UK economy	210
	7.5 Empirical tests: the Frankel model	215
	7.6 Conclusions	217
	Summary	217
	Reading guide	218
	Notes	218
8	Portfolio balance and the current account	220
	Introduction	220
	8.1 Specification of asset markets	221
	8.2 Short-run equilibrium	224
	8.3 Long-run and current account equilibrium	230
	8.4 Evidence on portfolio balance models	231
	8.5 Conclusions	236
	Summary	236
	Reading guide	237
	Notes	237
9	Currency substitution	239
	Introduction	239
	9.1 The model	240
	9.2 Evidence on currency substitution	246
	9.3 Conclusions	247
	Summary	248
	Reading guide	248
	Notes	249
10	General equilibrium models	251
	Introduction	251
	10.1 The Redux model	253
	10.2 Extensions of Redux	270
	10.3 Evidence	272
	10.4 Conclusions	273
	Summary	274
	Reading guide	275
	Notes	276
	Appendix 10.1: Derivation of price index (Equation 10.2)	278
	Appendix 10.2: Derivation of household demand (Equations 10.6 and 10.6')	279
	Appendix 10.3: Log linearisation of model solution (Equations L1–L4) Appendix 10.4: Sticky prices	280 282
	ADDOLIGIA I D.T. OLIOKY DITOOS	202

F	Part 3 A world of uncertainty	283
11	Market efficiency and rational expectations Introduction 11.1 Mathematical expected value 11.2 Rational expectations 11.3 Market efficiency 11.4 Unbiasedness 11.5 The random walk model 11.6 Testing for efficiency: some basic problems 11.7 Spot and forward rates: background facts 11.8 Results 11.9 Conclusions Summary Reading guide Notes	285 285 286 289 292 294 297 298 300 303 304 304 305
12	The 'news' model, exchange rate volatility and forecasting Introduction 12.1 The 'news' model: a simple example 12.2 The monetary model revisited 12.3 Testing the 'news' 12.4 Results 12.5 Volatility tests, bubbles and the peso problem 12.6 Conclusions Summary Reading guide Notes	308 308 309 311 317 320 323 328 328 329 330
13	The risk premium Introduction 13.1 Assumptions 13.2 A simple model of the risk premium: mean–variance analysis 13.3 A more general model of the risk premium 13.4 The evidence on the risk premium 13.5 Conclusions Summary Reading guide Notes Appendix 13.1: Derivation of Equation 13.16	333 334 335 338 346 348 349 350 350
F	Part 4 Fixed exchange rates	355
14	Target zones Introduction	357

		Contents
	14.1 What is a target zone	357
	14.2 Effect of target zones	360
	14.3 Smooth pasting	364
	14.4 An option interpretation	366
	14.5 A honeymoon for policymakers?	373
	14.6 Beauty and the beast: the target zone model meets the facts	375 376
	14.7 Intramarginal interventions: leaning against the wind14.8 Credibility and realignment prospects	380
	14.9 Conclusions	381
	Summary	382
	Reading guide	383
	Notes	383
	Appendix 14.1: Formal derivation of the model	385
15	Crises and credibility	387
	Introduction	387
	15.1 First-generation model	388
	15.2 Second-generation models	395
	15.3 Third-generation models	404
	15.4 The 2008 crisis	410
	15.5 Conclusions	413
	Summary	414
	Reading guide	415
	Notes	416
16	Optimum currency areas, monetary union and the eurozone	419
	Introduction	419
	16.1 Benefits of monetary union	423
	16.2 Costs of monetary union	427
	16.3 Other considerations	431
	16.4 Currency boards	439
	16.5 The eurozone 16.6 Conclusions	441 451
	Summary Reading guide	451 453
	Notes	453
	TVOICS	400
P	art 5 Alternative paradigms	459
17	Heterogeneous expectations and scapegoat models	461
	Introduction	461
	17.1 The market maker model	462
	17.2 Introduction to expectations with heterogeneous information	471
	17.3 Conclusions	488
	Summary	489
	Reading guide	490

Contents

	Notes Appendix 17.1:	490 492
	A. Derivation of the first-order condition for money (Equation 17.36) B. Derivation of the first-order condition for foreign bonds (Equation 17.37) C. Proof of the solution for the exchange rate (Equation 17.43) D. Proof that Equation 17.50 is the solution for Equation 17.49	492 493 493 494
18	Order flow analysis	495
	Introduction	495
	18.1 The structure of the foreign currency market18.2 Defining order flow18.3 Fear of arbitrage, common knowledge and the hot potato18.4 The pricing process	496 500 502 503
	18.5 Empirical studies of order flow 18.6 Conclusions	504 507
	Summary Reading guide Notes	508 508 508
19	A certain uncertainty: nonlinearity, cycles and chaos	510
	Introduction	510
	 19.1 Deterministic versus stochastic models 19.2 A simple nonlinear model 19.3 Time path of the exchange rate 19.4 Chaos 19.5 Evidence 	511 512 513 528 532
	19.6 Conclusions	537
	Summary Reading guide Notes	538 539 539
P	Part 6 Conclusions	543
20	Conclusions	545
	Introduction	545
	20.1 Summary of the book 20.2 The research agenda	545 547
	Appendix: list of symbols Bibliography Index	549 551 563